

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/IB2005/000092

International filing date (day/month/year)
17.01.2005

Priority date (day/month/year)
19.01.2004

International Patent Classification (IPC) or both national classification and IPC
B21C47/30, B65H54/58

Applicant
DANIELI & C. OFFICINE MECCANICHE SPA

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Barrow, J

Telephone No. +31 70 340-2636



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - in written format
 - in computer readable form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2005/000092

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-20,26,27,29,30
	No: Claims	21-25,28
Inventive step (IS)	Yes: Claims	1-20,26,27,29,30
	No: Claims	21-25,28
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: US-A-3 105 653 (BECKWITH ALBERT C) 1 October 1963 (1963-10-01)

1. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

A coiling device to coil rolled or drawn long products (P), comprising a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, on which mandrel said long products (P) are able to be wound in adjacent and superimposed spirals, in order to form a compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very angled, with respect to said central longitudinal axis, wherein said mandrel comprises a flange (56) substantially orthogonal, or very angled, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, and wherein said mandrel also comprises first arm elements (58), able to define the cylindrical surface of the core that forms said coil, and second arm elements (64), opposite said flange (56), and able to define a second flank of said coil, said first and said second arm elements (58,64) being mobile between a first coil-forming position and a second coil-removal position.

- 1.1 The subject-matter of claim 1 differs from this known coiling device in that said second arm elements (14) are provided with preventing means (40) able to contact said first arm elements (13), in order to prevent said first arm elements (13) from moving from said first coil-forming position to said second coil-removal position until said second arm elements (14) are in said first coil-forming position.
- 1.2 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
- 1.3 The problem to be solved by the present invention may be regarded as allowing correct performance during coiling by ensuring the arm elements (13) are maintained in their correct position.

1.4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

First and second arm elements with cooperating contact means are neither known nor hinted at by the available prior art.

2. Claims 2-20 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 21 is not new in the sense of Article 33(2) PCT.

3.1 The document D1 discloses (the references in parentheses applying to this document):

A coiling method to coil rolled or drawn long products (P), by means of a mandrel, arranged cantilevered and rotatable with respect to a central longitudinal axis, on which mandrel said long products (P) are able to be wound in adjacent and superimposed spirals, in order to form a compact coil having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very inclined, with respect to said central longitudinal axis, wherein said mandrel comprises a flange (56) substantially orthogonal, or very inclined, with respect to said central longitudinal axis and able to define a first lateral flank of said coil, wherein that in a first step to form said coil, said mandrel has first arm elements (58) substantially parallel to said central longitudinal axis which define the cylindrical surface of the core that forms said coil, and second arm elements (64), opposite said flange (56), which define a second lateral flank of said coil, and in that at the end of said first step to form said coil, said first and said second arm elements (58,64) are displaced to a position of non-interference with said coil, in order to allow said coil to be removed axially from the cantilevered end of said mandrel.

3.2 D1 discloses all the features of claim 21 consequently claim 21 is not novel.

4. Dependent claims 22-25 and 28 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty, see document D1 and the corresponding passages cited in the search report.

5. The combination of the features of dependent claims 26 and 27 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows: Neither a fixed deposition ring (28) on a first flange, for forming the first spirals nor a support surface (27) to cooperate with the outermost spiral, on the containing arm elements associated with collapsible axial arm elements is not suggested by the available prior art.
6. The combination of the features of dependent claims 29 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows: In disclosures of the available prior art the displacement of the containing arm elements is associated with the contraction of the axial arm mandrel elements, in the present invention the holding means (22) maintain the position of the axial arms (13) regardless of the positions of the containing arms (14).
7. The combination of the features of dependent claims 30 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows: Control means (36) allows an adjustment of the position of arm (13) independently of the position of arm (14).

Re Item VII

8. Reference numeral (36) appears in the description on page 7, referring to "metal wire (36)" and on page 10, and in claim 30, referring to "control means (36)". Figure 2 contains two reference numerals (36).